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STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

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MORTALITY EXPERIENCE OF THE FIRST QUARTER OF 1930

Never before during the first quarter of any year, have health conditions been as good as have prevailed during the winter months of 1930. This is clearly shown by the mortality experience of approximately 19,000,000 persons who are insured in the Industrial Department of the Metropolitan Life Insurance Company. Comparison with the figures for the like period of 1929 shows marked reductions, for both white and colored policyholders, in the deathrates for practically all of the important causes of death. Some improvement was expected, it is true, as there has been no wide prevalence this year of any of the epidemic diseases, whereas last year's first-quarter health conditions were the worst experienced during the entire decade, owing to the epidemic of influenza which reached its height late in January, 1929. But comparison with 1928, a normal year, also shows a considerable reduction for all causes combined and marked improvement for such important diseases as influenza, tuberculosis, pneumonia, diarrheal complaints and chronic nephritis.

Tuberculosis

The outstanding item again this year is the reduction in the deathrate for tuberculosis. The drop has been so marked, that with only one-quarter of the year behind us, it is almost safe to announce that 1930 will register a new minimum in the mortality from tuberculous disease. The first half of the year, invariably, is the period of highest mortality from tuberculosis. At the end of the first quarter, the deathrate among white policyholders was only 65.3 per 100,000, a reduction of 10.3 per cent. from the lowest figure that had previously been recorded in the corresponding period. Among the colored, the deathrate was 207.8, marking a drop of 4.6 per cent. from the lowest previous figure. Data at hand for the

greater part of April show that nothing has developed during that month to change the prevailing downward trend. Thus, with the months of normally low tuberculosis mortality before us, it will be contrary to all past experience if anything transpires to offset the large gain so far shown. In the January STATISTICAL BULLETIN we said that "the outlook at the present time is that the downward swing of the tuberculosis deathrate will continue, and ten years from now the deathrate among these wage earners will be well on its way toward 40 deaths per 100,000 insured." There is a strong probability now that this low point will be registered in even less time.

Diseases of Childhood

With the exception of scarlet fever, all of the principal epidemic diseases of childhood have shown reduced mortality as compared with the winters of both 1929 and 1928. The most noteworthy drop is that for diphtheria. All indications point to a new minimum deathrate for this disease this year. At the end of March, the diphtheria mortality rate for white and colored policyholders combined was only 8.9 per 100,000 as compared with 10.7 in 1929.

Cancer

An encouraging item is a pronounced drop in the deathrate, among white persons, for cancer. If this persists (which is by no means assured), 1930 will be the first year since 1924 to show any interruption in the steadily rising mortality from malignant growths. Data are not available at this time to show whether the improvement has applied to all age ranges, or only to certain age groups. If the decline continues throughout the second quarter, the Company's cancer mortality data for the first half of 1930 will be analysed by age, and the facts published in the July STATISTICAL BULLETIN.

Other Causes of Death

The largest decreases in the deathrate, as compared with the early part of last year, have been those for influenza and pneumonia; but there have also been more or less marked declines for diabetes, cardiac diseases, diarrheal complaints, chronic nephritis and puerperal conditions. The rather large drop in the diabetes deathrate may not be at all significant as the comparison is with the very period of 1929 when an influenza outbreak, which hastened the deaths of many diabetics, was at its height. Deaths from alcoholism dropped

Deathrates* per 100,000 Persons Exposed. First Quarters of 1928, 1929, 1930 Compared. By Color for Principal Causes of Death. Metropolitan Life Insurance Company, Weekly Premium Paying Industrial Business

Causes of Death	Deathrates per 100,000 Persons Exposed					
	White			Colored		
	Jan.-Mar. 1930	Jan.-Mar. 1929	Jan.-Mar. 1928	Jan.-Mar. 1930	Jan.-Mar. 1929	Jan.-Mar. 1928
All Causes of Death	861.8	1072.1	890.0	1551.7	1891.3	1590.1
Typhoid fever	1.0	1.2	1.5	2.0	3.1	2.2
Measles	3.4	4.2	5.7	1.4	1.2	4.5
Scarlet fever	4.2	3.9	4.2	.9	.7	1.5
Whooping cough	4.8	7.0	5.0	4.8	11.1	6.7
Diphtheria	9.6	11.4	14.2	3.7	7.1	6.3
Influenza	21.6	111.5	25.8	67.1	214.8	63.3
Meningococcus meningitis	3.7	5.2	1.5	12.1	7.5	1.7
Tuberculosis (all forms)	65.3	76.9	72.8	207.8	226.0	228.9
Tuberculosis of resp'y system	57.2	68.5	64.2	180.6	201.9	199.7
Tuberculosis of the meninges, etc	3.6	3.4	4.1	6.0	4.2	7.0
Other forms of tuberculosis	4.5	5.0	4.5	21.3	20.0	22.1
Cancer	74.8	78.4	75.8	74.4	74.1	77.3
Diabetes	20.7	24.3	19.1	21.8	24.5	23.0
Alcoholism	3.1	3.5	2.8	4.8	6.6	5.8
Cerebral hemorrhage; apoplexy	54.0	59.5†	55.0†	124.7	114.4†	100.0†
Organic diseases of the heart	150.1	168.3	142.8	253.7	284.5	237.1
Total respiratory diseases	115.3	167.9	121.4	210.6	302.3	247.6
Bronchitis	4.4	5.7	5.1	4.4	5.7	6.5
Bronchopneumonia	42.4	65.6	43.8	62.2	91.3	82.5
Pneumonia (lobar and undefined)	60.1	85.8	63.6	132.9	189.4	143.5
Other dis. of resp'y system	8.4	10.9	8.9	11.1	15.8	15.1
Diarrhea and enteritis	11.5	14.1	14.4	10.9	13.0	14.1
Under 2 years	9.2	11.5	11.9	6.1	6.6	8.6
2 years and over	2.3	2.6	2.5	4.8	6.4	5.5
Acute nephritis	3.7	3.9	4.1	14.8	14.6	15.4
Chronic nephritis	63.5	73.0	71.0	120.4	134.9	139.4
Total puerperal state	13.0	14.2	13.4	17.5	22.7	19.0
Total external causes	66.7	66.9	65.0	112.3	111.1	105.3
Suicides	8.9	8.8	8.2	8.0	6.8	6.2
Homicides	3.5	3.0	2.5	29.8	29.9	31.9
Accidental and unspecified violence	54.2	55.1	54.4	74.4	74.5	67.2
Automobile accidents	17.1	15.7	14.2	17.2	13.4	15.1
All other and ill-defined causes of death	171.6	176.8	174.6	286.0	317.0	291.0

*All figures in this table include infants insured under one year of age. The figures for 1930 and 1929 are subject to slight correction, as they are based on provisional estimates of lives exposed to risk.

†Rate not comparable with that for 1930.

from 175, in the first quarter of 1929, to 155 in the like period of the current year; and the deathrate declined from 3.8 per 100,000 to 3.3, a decrease of 13.2 per cent.

Suicides and homicides have been a little more frequent than in the early months of last year. The deathrate for accidents, as a group, is practically unchanged. Automobile fatalities, on the other hand, have gone on increasing among both white and colored policyholders. Unless marked improvement takes place later in the year the deathrate for this cause will be considerably in excess of the previous maximum, recorded only last year.

The table on page 3 presents the deathrates among white and colored policyholders respectively, for the first three months of 1930, 1929 and 1928.

LOWER DEATHRATES MEAN FEWER ORPHANS

One of the most fortunate consequences of the reduction of mortality that has taken place in past decades is the saving of a great army of children from the trials, physical, mental and economic, which the loss of a parent occasions. How great has this saving been? We can make an approximate estimate by comparing the number of orphans that would have been present in 1920 in our population under the mortality conditions at the beginning of the century, and the corresponding number under the mortality of 1920.

It was computed under the mortality conditions of 1920 that there were in the United States in that year about 2,060,000 white children under seventeen years of age who had lost their father only, 1,540,000 who had lost their mother only, and 330,000 who had lost both parents. Had the mortality in 1920 remained on the high level of 1901, there would have been about 400,000 additional children who had lost their father only, 150,000 more who had lost their mother only, and over 100,000 additional completely orphaned children.

The early indications for 1930 are even more favorable. The prospects are that it will be one of the best health years, if not actually the best. If no setback occurs, the present year may establish a record not only in the other savings incidental to decreasing mortality, but also in this most important respect of reducing orphanhood.

NON-FATAL ACCIDENTAL INJURIES IN 1929

Injuries in the home account for the largest number of non-fatal accidental injuries in the United States. According to the

facts reported by twenty-two visiting nursing associations, 46 per cent. of the injuries cared for by their nurses arose out of domestic pursuits, 45 per cent. occurred in public places and 9 per cent. happened while the injured person was at work.

Among the domestic injuries, nearly one-half were due to falls, on or down stairs, over chairs, in bath-tubs, slips on rugs, adventure with the domestic stepladder, and to falls out of windows. The falling and slipping hazard in the home has never been paid the respect which it deserves as a leading cause of disability and death. The burn and scald hazard is next in importance as a cause of domestic injury. In 1929, 28 per cent. of the home injuries receiving nursing care arose out of the stove, grate, lamp and match hazard. In some parts of the United States, the grate fire is still the dominant mode of domestic heating, and this instrumentality takes its toll, especially of child lives, during every cold snap. The humble tea-kettle, the wash-boiler and wash-tub play their part in causing injury in the home. The unguarded or misused kitchen knife accounted for 12 per cent. of the non-fatal injuries in the home last year. With all the progress that has been made in modernizing the home, especially kitchen equipment, there still occurs a lamentable toll of injury and death. In the United States last year about 23,000 deaths occurred from injury in the home, and 87 per cent. of these injuries could be ascribed to three agencies—the slip or fall, burns and scalds, and cuts and scratches.

When will the domestic injury hazard be submitted to examination in the same spirit and with the same thoroughness with which hazards in industry and in public places have been approached? When will the safety movement attack the dangers inherent in the use of domestic appliances and encourage safe practices in the use of the devices already available?

Injuries in public places were second in importance in this nursing experience. The automobile accounted for 45 per cent. of these non-fatal public injuries, falls and slips on the street made up 28 per cent., and railroad and streetcar injuries were 7 per cent. of the total for injuries in public places. The death toll for the automobile in the United States during 1929 was about 31,500, and the indications for 1930 suggest a much higher figure.

Injuries arising out of or in the course of occupation made up nearly 9 per cent. of the non-fatal injuries in this nursing experience.

It is hoped that the enterprise of these visiting nursing associations in gathering data on non-fatal injuries will lead to the compila-

tion of similar facts for the experience of other agencies dealing with the sick and injured. Hospital experience, especially, is desired. Here the facts would relate to the graver injuries requiring major facilities for care and treatment. Facts from hospital records would describe the burden of prolonged disability, permanent incapacity and staggering expense which follow so many of the injuries arising in the home, in public places and in industry. The record of 100,000 deaths from accidental injury in the United States population, last year, should be supplemented by further information on the millions of crippling, costly, non-fatal injuries.

The data from the twenty-two visiting nursing associations for 1929 are set forth below:

Non-Fatal Accidental Injuries by Place and Means of Occurrence. Visiting Nurse Service, Metropolitan Life Insurance Company,* 1929

Place and Means of Injury	All Ages		Number of Cases Classified as to Age Periods				
	Number	Per cent.	Under 5 years	5 to 14 years	15 to 54 years	55 years and over	Age not specified
PUBLIC:	2,959	100.0	153	727	1,544	491	44
Automobile	1,342	45.3	54	262	777	225	24
Railroads and street cars	197	6.7	2	10	143	39	3
Other vehicles	104	3.5	10	47	43	4	.....
Falls	819	27.7	56	189	375	192	7
Burns	53	1.8	6	33	13	1	.....
Cuts and scratches	174	5.9	11	87	67	7	2
Injuries by animals	29	1.0	3	15	8	2	1
Other public accidents	241	8.1	11	84	118	21	7
HOME:	3,060	100.0	576	478	1,395	586	25
Falls	1,424	46.5	161	140	677	438	8
Burns and scalds	862	28.2	304	151	332	66	9
Cuts and scratches	369	12.1	48	109	186	26	.....
Machinery	76	2.5	15	15	36	10	.....
Injuries by animals	19	.6	6	10	1	1	1
Firearms	10	.3	.....	4	5	1	.....
Other home accidents	300	9.8	42	49	158	44	7
OCCUPATIONAL ACCIDENTS:	566	.....	.....	4	481	65	16

*Data contributed by Visiting Nursing Associations in the following cities: Chicago, Ill.; Milwaukee, Wis.; Brooklyn, N. Y.; New York City, N. Y.; St. Louis, Mo.; Boston, Mass.; Providence, R. I.; Pittsburgh, Pa.; Nashville, Tenn.; Philadelphia, Pa.; Cleveland, Ohio; Memphis, Tenn.; Kansas City, Mo.; Albany, N. Y.; Atlanta, Ga.; New Orleans, La.; Cincinnati, Ohio; Newark, N. J.; Norfolk, Va.; Baltimore, Md.; Grand Rapids, Mich.; Detroit, Mich.

TREND OF THE SYPHILIS DEATHRATE FROM 1912 TO 1929

The syphilis deathrate showed a decided rising tendency in this country in the period ending with 1917, the year in which the United States entered the World War. In the very next year, however, it registered the largest year-to-year drop ever recorded. This was undoubtedly traceable to increased efforts for venereal disease control, which was stressed after our entry into the war. Since 1918, the trend has been slightly downward, with 1928 and 1929 showing the two lowest deathrates recorded since 1912 among Industrial policyholders of the Metropolitan Life Insurance Company (24.7 and 24.6 per 100,000, respectively). These rates are for the mortality definitely reported from syphilis, together with that from locomotor ataxia and general paralysis of the insane. The best medical opinion is that virtually all such deaths are of syphilitic origin.

The above observations, however, relate to the joint mortality rates for white and colored policyholders. Further analysis shows

Combined Deathrates per 100,000 for Syphilis, Locomotor Ataxia and General Paralysis of the Insane. Age Division 25 to 64 Years. By Color and Sex 1912 to 1929
Metropolitan Life Insurance Company. Industrial Department

Year	Total Ind'l Department	White		Colored	
		Males	Females	Males	Females
1929*	24.6	28.3	8.8	97.9	41.0
1928	24.7	28.8	9.7	92.7	39.3
1927	25.9	31.6	9.6	92.4	44.1
1926	26.7	34.6	10.1	86.3	44.6
1925	26.4	33.3	10.3	92.6	41.2
1924	27.0	36.5	10.4	85.2	44.3
1923	28.4	38.7	12.4	82.0	43.3
1922	26.9	34.1	10.7	88.6	48.5
1921	25.8	34.2	11.9	79.7	34.3
1920	26.0	35.3	11.6	80.3	32.9
1919	25.4	34.5	12.0	65.5	37.5
1918	29.7	42.4	12.6	79.4	40.4
1917	34.3	49.0	15.6	95.4	38.7
1916	31.8	43.6	13.6	90.9	45.6
1915	31.5	43.3	14.5	91.8	38.0
1914	28.9	40.1	12.9	79.2	38.4
1913	27.5	40.3	12.5	62.4	36.5
1912	27.2	38.7	13.1	58.5	37.4

*1929 rates based on provisional exposure.

that the syphilis deathrate is steadily declining among both white males and white females, with 1929 registering a lower deathrate than ever before recorded. Among colored females, although the general trend since 1918 has been slightly upward, some little improvement has been in evidence since 1926. Among negro males, however, the syphilis deathrate is higher today than ever before and the upward tendency is pronounced. The 1929 deathrate (97.9 per 100,000), is 67 per cent. in excess of that recorded in 1912 (58.5); 22 per cent. above that for 1920 (80.3) and 13 per cent. higher than in 1926 (86.3).

The present analysis shows that the situation with respect to venereal disease is substantially the same as when a similar study was made by the Metropolitan Life Insurance Company four years ago. The problem of control is concentrated, above all, among the negroes and, more especially, among negro males.

THE DECLINE IN MORTALITY FROM COMA AMONG DIABETICS

One of the outstanding achievements in the insulin treatment of diabetes is the reduction in the number of deaths from coma. As early as 1922, just before insulin came into general use, an eminent diabetes specialist asserted that deaths from coma were needless. The statement was then received with incredulity and even adverse criticism, but it now has wide acceptance. In the best hospital practice today, deaths in coma either do not occur at all, or are very rare.

There is increasing evidence that fewer deaths with coma are occurring. In 1925 a study by the Statistical Bureau of the Metropolitan Life Insurance Company revealed that coma was present as a terminal condition in nearly half (48 per cent.) of the deaths of diabetics; in a study made early last year, it was present in only 41 per cent. of the cases, and in a series of cases studied, still more recently, the incidence of coma declined to 37 per cent.

Encouragement, too, is found in other aspects of the analysis of the causes of death of 3,386 diabetics during 1929. The facts indicate that, more and more, diabetics are dying of other diseases which would have caused death regardless of the presence of diabetes. For example, 140 of the 3,386 diabetics died from tuberculosis, 78 from cancer, 19 from syphilis, and 16 from accidental causes. Of the rest, no less than 2,127, or 68 per cent., had some form of cardio-

vascularrenal disease. This is normal in a group largely concentrated in the higher age ranges, as these persons were.

The improvement in the diabetes situation is the result of the education of both physicians and patients. In part, however, it is due to a special and widespread effort to reduce the mortality from coma. Its success is gratifying to all who have participated in it. The emphasis on this aspect of diabetes is not misplaced, because the greatest possible immediate improvement in the life span of diabetics will be attained by abolishing diabetic coma. For, coma takes principally, the young diabetic and persons whose diabetes is of short duration. The older diabetics, particularly those who have had the disease many years (in common with the overweight class from which diabetics are largely recruited) are prone to premature death from degenerative diseases of the heart, kidney, brain and arteries, and much improvement in their longevity cannot be expected. Coma, however, is both preventable and curable. Much of the success in preventing it lies with the patient, if he is properly educated regarding his diabetes. Adherence to diet and to other prescribed precautions, if he becomes ill, will usually suffice to ward off coma. Upon physicians there is the double responsibility: first, they must thoroughly educate their diabetic patients in regard to the dangers of coma, how it may be prevented and what to do if it occurs; and, secondly, they must do their utmost to see that, in the emergency of coma, the patient has the benefit of careful and continuous attention which the successful treatment of coma demands.

HEALTH RECORD FOR MARCH, 1930

The health record for March, 1930, was better than for any previous March. This is indicated by the low deathrate of 9.4 per 1,000 among approximately nineteen million Metropolitan Industrial policyholders. The figure is well below the previous low point (9.8) established in the same month of last year. There was a slight drop in March from the February mortality rate of 9.6 per 1,000.

Among policyholders living west of the Rocky Mountains the deathrate was 6.5 per 1,000 in March, 1930, as compared with 7.2 for the same month in 1929; for the rest of the United States the 1930 figure was 9.7 as compared with 10.1 last year. In Canada, this year's March mortality rate (8.9 per 1,000) was slightly above that for last year (8.8).

Except for measles, scarlet fever, cancer and heart disease every disease listed in the table on page 11 registered a decline in March as compared with the corresponding month of 1929. The record for violent deaths was not so favorable, as suicides, homicides and automobile fatalities recorded increases.

The general deathrate for the large cities of the United States in March was 14.0 per 1,000 estimated population. This was a little below the rate for March, 1929 (14.5) and for February, 1930 (14.3). There was increased prevalence in March, as compared with February, of measles, scarlet fever and typhoid fever but there were fewer cases of diphtheria, influenza, poliomyelitis and smallpox. More sickness was reported this year, than in March, 1929, from measles, smallpox and typhoid fever, with fewer cases of diphtheria, influenza, poliomyelitis and scarlet fever.

Measles has been so much more prevalent than in the early part of last year, that it is very gratifying that the deathrate remains low and shows only a small rise as compared with March, 1929. Reports from thirty-seven states show 46,301 cases in the first four weeks of March, as compared with 32,081 in the corresponding weeks of February. The more noteworthy increases occurred in Maine, Massachusetts, Maryland, North Carolina, Florida, Alabama, Colorado and Oregon. The increase in scarlet fever morbidity was slight, although, in New York State, 2,514 cases were reported in March, as compared with 1,957 in February; while, in Wisconsin, the corresponding figures were 785 and 561, and, in Tennessee, 280 and 129. Reports from twenty-one states show a decline in influenza cases from 10,038 in February to 7,959 in March.

Epidemic cerebrospinal meningitis continues to be much more prevalent in 1930 than in either 1929 or 1928. This disease has been especially prominent in Michigan, Tennessee and Mississippi. In Sunflower County, Mississippi, an outbreak of this disease was confined chiefly to negroes, who sustained a mortality of 37 per cent. A consulting service for epidemic meningitis under the auspices of the Massachusetts State Department of Health has been established. While the meningitis situation in that State is not at present alarming, the establishment of this service is a precaution for any future emergency and a forward step in communicable disease control.

The following table shows the mortality among Industrial policyholders for March 1930, February, 1930 and March, 1929, together with the cumulative deathrate for the first three months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Deathrates* per 100,000 for Principal Causes, Premium-Paying Business in Industrial Department (Annual Basis)

MONTHS OF MARCH, 1930; FEBRUARY, 1930, AND OF MARCH, 1929

CAUSES OF DEATH	RATE PER 100,000 LIVES EXPOSED*				
	Mar. 1930	Feb. 1930	Mar. 1929	Cumulative Jan.-Mar. 1930	Cumulative Jan.-Mar. 1929
TOTAL—ALL CAUSES	940.6	963.8	980.5	949.2	1,153.8
Typhoid fever	1.1	1.3	1.7	1.2	1.4
Measles	3.6	3.3	3.5	3.1	3.8
Scarlet fever	3.3	3.9	2.8	3.8	3.5
Whooping cough	4.2	5.5	5.1	4.8	7.3
Diphtheria	6.8	9.0	8.7	8.9	10.7
Influenza	25.3	27.3	53.1	27.4	122.3
Tuberculosis (All forms)	86.1	82.3	92.0	83.4	94.0
Tuberculosis of resp'y system	75.4	71.9	80.9	72.8	83.8
Cancer	74.2	73.1	72.3	74.8	76.4
Diabetes mellitus	19.6	20.2	20.6	20.8	23.8
Cerebral hemorrhage	62.9	68.2	57.3†	63.0	65.2†
Organic diseases of heart	159.5	169.0	154.2	163.2	179.6
Pneumonia (All forms)	119.0	117.2	128.7	114.2	164.6
Other respiratory diseases	14.0	11.8	20.3	13.2	16.9
Diarrhea and enteritis	11.1	11.1	12.8	11.5	13.7
Bright's disease (Chronic nephritis)	70.7	71.0	72.0	70.7	79.3
Puerperal state	13.1	14.4	14.0	13.6	15.0
Suicides	9.8	7.5	8.5	8.8	8.4
Homicides	7.5	5.5	5.4	6.8	6.3
Other external causes (excluding suicides and homicides)	48.7	58.7	50.8	56.8	56.5
Traumatism by automobiles	13.9	16.4	13.3	17.1	15.1
All other causes	200.1	203.5	196.6	199.3	205.2

*All figures in this table include infants insured under one year of age and are subject to slight correction, as they are based on provisional estimates of lives exposed to risk.

†Rate not comparable with that for 1930.

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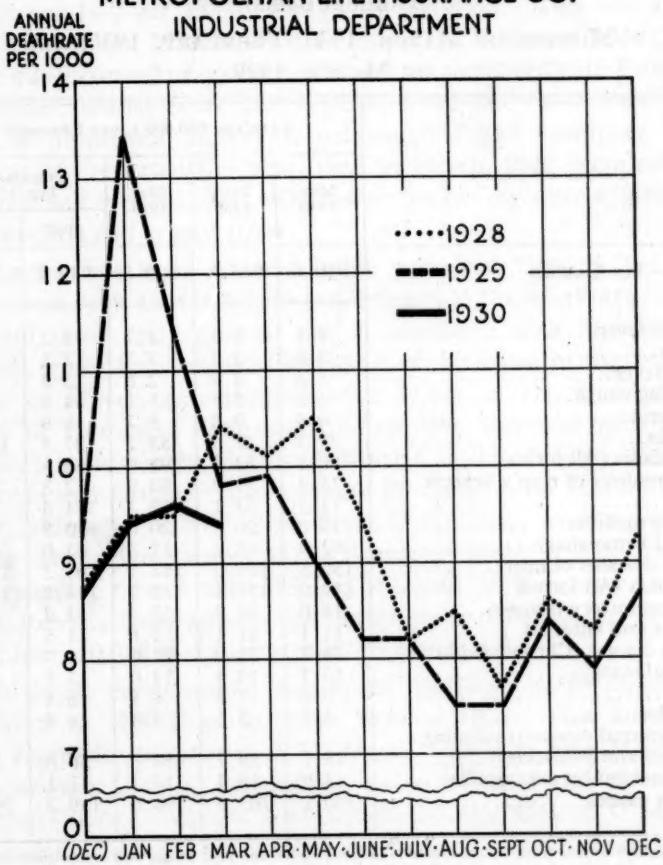
DEATHRATES
FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE CO.
INDUSTRIAL DEPARTMENT



1928*	9.5	9.5	10.4	10.1	10.5	9.5	8.2	8.5	7.7	8.6	8.3	9.3
1929	13.4	11.4	9.8	9.9	9.0	8.2	8.2	7.5	7.5	8.4	7.9	8.7
1930	9.4	9.6	9.4									

* Rates for 1928 are final.

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